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TENTH SERIES.
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Care About the Supplies.

How about the fodder supply for the winter? Does it look like carrying the stock through till grass? That time is four months or more off. It may not be well to be guided in feeding by last winter. Then, the weather all through was the mildest and most favorable for animals which had been known for many years. So, if you have been feeding a little lavishly, better hold up some, and study out all ways to make things go the furthest. There is so much waste in and about some barns, that we don't wonder so many farmers are compelled about the windy days of March to scurry around the neighborhood to buy of the more provident, hay or other materials to eke out, when they had reckoned their supply very ample in the fall; and here, our hints about convenient feed boxes and mangers in last number of *THE FARMER*, will come in helpfully. These, if you don't have them, ought to be provided. If the corn stalks can be cut up more of them will be eaten and they will thus leave the manure in better shape for handling. If there be any inferior hay, cut that up, soften with warm water, and mix with bran and meal, using a little salt to savor, but don't let any of the long feed be trodden under foot. It will be too precious for that; good wheat straw is not to be ridiculed; made into a warm cut mess, cattle will eat it well and thrive on it. So, if you have any misgivings now about feeding materials giving out prematurely, these suggestions may be of use. But you say, perhaps, too much trouble; well, if that trouble will be equivalent to money in the end, why not take it? Much of the help now-a-days on the farm needs to be looked after to see that nothing is lavished and wasted.

Smaller Areas, Better Cultivation and Diversified Crops Needed.

Andrew Carnegie, in response to a toast at a banquet given the Pan-Americans, among other true remarks said, "Agricultural products are the only things that cannot be produced cheaper by the aggregation and combination of labor and capital." We see a verification of this remark in our general observation; persons owning large farms, well stocked and perhaps with ample

capital, and yet, by the time they pay their labor, fertilizer and farm machinery bills, they have but little left at the end of the year, while the holder of a small farm who has concentrated his limited capital in the employment of labor and the purchase of fertilizers in the improvement of his land to its utmost profitable capacity, and with a rotation of different crops, such as he could manage and control, has almost invariably succeeded, if not making a great deal of money, succeeded in making an independent living and something besides.

Good common sense management seems to be the secret of success, not only in general business but in farming. While it is impossible to adopt a perfect system to meet seasons, markets and other contingencies, yet any observing man can to a great extent meet them by wise planning, and the prompt execution of those plans as exigencies may require. We have evidences of that in our own county. One gentleman with a forty-acre farm, one-half in cultivation, this year, himself with one hired hand, has sold over \$800 worth of strawberries, potatoes, tomatoes, etc., besides raised enough corn, hay, wheat, etc., to support his stock and family. Another has, after deducting freights, commissions and fertilizers, cleared about \$1,800 from seventeen acres of melons, and it is no uncommon thing for a farmer to say he has cleared \$50 to \$100, and even more, from an acre of strawberries. But when they have increased their patch to ten or twenty acres, they were neglected, and the expenses "ran away with the profits."

We might elaborate, but we think it is apparent to every observing man that the day has come for a better and more intelligent system of farming, the cultivation of less land, thereby economizing in labor over which we have little control, and by intelligent and economical methods bringing that area to a high state of cultivation with a variety of crops that may be best adapted to the soil, seasons and markets, so planned and arranged that they will come on in rotation.

Wicomico Co., Md. W. B. T.

The Work of the Experiment Stations.

Few farmers, and indeed few others usually well informed, are

aware of the amount of work, its scope and aim, being done by these institutions to benefit the producers of the country; or, as a professor in the Austrian School of Agriculture, who had visited seventeen agricultural colleges, twenty experiment stations and other kindred places here, puts it, "aim to make their researches intelligible to all, and to draw such conclusions from the results of such work as will be of practical interest and use to the common farmer." There are 400,000 copies of the exceedingly valuable reports of the Agricultural Department printed, but what are they among 8,000,000 of farmers? The bulletins and reports of the State Experiment Stations, and their oftentimes valuable bulletins do not reach, perhaps, more than a tithe of the farmers in the state, and rarely penetrate beyond its borders. The agricultural papers and journals rarely touch the "climate, the rainfall, or the weather" either editorially, or otherwise, all controlling factors in plant growing rendering soil and manure of secondary consideration.

The general government, and very many of the states, having made quite liberal appropriations for the support of these experiment stations, involving the collection of taxes in some form to meet them, it is right that they who pay them should know what they are doing.

The experiment station record for January, 1890, thus classifies them in 1888-9: Twenty-seven are studying problems relating to meteorology and climatic conditions; thirty-one are studying the soil by investigations of its geology, physics and chemistry; experiments in tillage, drainage or irrigation; soil tests with fertilizers or other experimental inquiries. Thirty-five are making analyses of commercial and home-made fertilizers, or are conducting field experiments with fertilizers. Thirty-nine are studying the more important crops with reference to methods of culture, manuring and rotation; varieties adapted to different localities and purposes, and chemical composition and nutritive value. Twenty-five stations are investigating the composition of feeding stuffs, and in some instances making digestion experiments. Seventeen are dealing with questions relating to silos and silage. Twenty-

four are conducting feeding experiment for milk, beef, mutton, pork, or are studying different methods of feeding. Eighteen are investigating subjects relating to dairying, including the chemistry of milk, bacteria of milk, creaming, butter making and the construction and management of creameries. At least thirty-three stations are studying methods of chemical analysis. Botanical studies occupy more or less of the attention of thirty-three stations; these include investigations in systematic and physiological botany, mycology, with reference to the diseases of plants, the testing of seeds with reference to their vitality and purity, and classification of weeds and methods for their eradication. Thirty-five to a greater or lesser extent in horticulture, testing varieties of vegetables and fruits and making studies in varietal improvement and synonymy. Nine have begun operations in forestry. Twenty-five investigate injurious insects with a view to their prevention or destruction. Fifteen give attention to veterinary science. At least four are experimenting in agriculture, and three in aviculture. Sugar making is experimented with at six stations.

These varied experiments employ 63 directors and vice-directors, 106 chemists, 73 agriculturists, 40 horticulturists, 30 botanists, 29 entomologists, 19 veterinarians, 10 meteorologists, 5 biologists, 5 viticulturists, 3 physicists, 3 geologists, 2 mycologists, 1 irrigatist, 14 in charge of sub-stations, 13 secretaries and treasurers, 16 clerks, 17 miscellaneous, total 449, or, subtracting those entered in two classes, we have a total of 402.

One thing strikes one with profound astonishment in going over the above lists, the very few stations engaged in systematic investigation of meteorology and climatic conditions judging from the small number of meteorologists employed, only 10. It is conceded on all hands that soil, climate, weather, are controlling factors of all growths, hence need the most attention of these scientists and scientific stations. It is estimated that 10,000 pages are issued by these experiment stations in the form of reports, bulletins, circulars; a truly large mass of reading from which to extract valuable information.

Experimenting with Potatoes.

The Vansville Farmers' Club having offered a premium for the best acre of potatoes grown (only members allowed to contest), it occurred to me that it might be beneficial to our club if these acres were prepared in different ways instead of one, so as to be able to determine which treatment would prove most profitable in our vicinity. But I must confess I am very much disappointed in the returns of lot designated by letter L. In the first place not more than half of them came up; secondly, they were affected very much by the drouth; thirdly, by the rot; and, notwithstanding these hindrances, there were harvested 320 bushels, of 56 lbs. to the bushel, of sound potatoes. It seems to me without these drawbacks, I could have reasonably expected from five to six hundred bushels. The acre known as C came up a little better; planted ten days later than L; therefore, were not so much affected by drouth, but rotted very badly before digging. Gathered 275 bushels from this acre. Acre No. 3, designated by letter B, was planted twenty days after L; came up very nicely and was not affected either by drouth or rot and yielded 240 bushels. So you perceive that B had advantages of season and a good stand which were denied both L and C. As we proceed, please keep all of these items in mind so as to be able to decide which plat is the most profitable.

The land on which all were planted was a medium loam. Acre L had one car load or seventeen two-horse wagon loads of stable manure spread on it March the 8th and left until April 5th, when another car load was applied which was permitted to remain until May 1st, when all was plowed down about eight inches deep. June 1st, land well prepared; rows run off twenty-seven inches apart, five inches deep. Eleven hundred pounds of fertilizer was sown over them broadcast, consisting of 450 lbs. bone, 450 lbs. Baker's potato guano, 100 lbs. muriate of potash, 100 lbs. nitrate of soda, mixing about 20 lbs. of sulphur with same. Potatoes planted about twelve inches apart, June 1st, in rows, covered nicely; harrowed down when commencing to come up; worked four times.

Now let us compute what this acre has cost:

1,100 lbs. fertilizer.....	\$18 20
2 car loads manure.....	68 00
24 bushels potatoes, "Pride of the West" for seed.....	20 00
Plowing, Planting, Working and gathering.....	30 00
Making in all.....	\$126 20
320 bu. potash at 80 cts.....	\$256 00
Acre L improved.....	50 00
	\$306 00
Net.....	\$179 80

I would say here, the three acres L, C, B, were in cabbage last year,

and L and C were manured; also that when I found that L came up so badly, I had it replanted; but they never amounted to much.

Acre C had fifteen two-horse wagon loads of cattle manure applied the middle of April, plowed down and prepared the same time as L, excepting rows were thirty inches apart and 1,000 lbs. Fertilizer sowed in drill instead of broadcast. Fertilizer mixed in same proportion as L. Potatoes planted ten days later than L and worked just the same.

So that acre C cost:

Fertiliz r, 1,000 lbs.....	\$16 50
15 loads manure.....	18 75
Seed, "Empire State".....	9 00
Planting, plowing, working and digging.....	20 00
	\$64 25
275 bushels at 70c.....	\$192 50
Acre improved.....	25 00
	\$217 50
Net.....	\$152 65

Acre B was plowed at the same time as L; ground prepared and planted twenty days later with the Aspinwall potato planter, using 600 lbs. of the same mixture as L and C; rows only twenty-four inches apart, working only three times.

Now B cost for

600 lbs. fertilizer.....	\$ 9 75
Seed, "Burbank" and "Rural Blush".....	16 00
Plowing, planting, working and gathering.....	18 00
	\$43 75

B.	
240 bushels at 70c.....	\$168 00
Expenses.....	43 75
Profit.....	\$124 25

C.	
275 bushels at 70c.....	\$192 50
Land improved in value.....	25 00
	\$217 50
Expenses.....	64 85
Profit.....	\$152 65

L.	
320 bushels at 80c.....	\$256 00
Land improved in value.....	50 00
	\$306 00
Expenses.....	126 20
Profit.....	\$179 80

No doubt you observed the potatoes of L were put at 10 cents more than C and B, for the reason there were fewer of seed size. I have also tried to be as brief as the subject would allow.

L. C. SMALL.

Potatoes.

Our experiment stations as a whole, our Maryland one included, with numerous other experimenters in various parts of the country that have been teaching the planting of whole potatoes as the best for large yields, have received a heavy set-back from the results of experiments made in various parts of the country for the *American Agriculturist's* prize for the largest yield per acre. There were forty-one competitors, from Colorado to Maine and Washington Territory, of whom sixteen were from Maine,

the great potato growing state. The yields were from 974 bushels, the first prize-winner from Wyoming, to 258 bushels in Pennsylvania, and the profits from \$714 to \$75. The Wyoming man used no fertilizer, but gave "copious irrigations," while the Keystone man used Mapes' fertilizer. The prize-winner cut his potatoes to one, two and three eyes, and he of the Keystone State to two. As to mode, two cut to one, two and three eyes; six to two and three eyes; five to one; five to one and two; thirteen to two eyes; two to one and three; two to four eyes; three planted whole and two halves. The prize-winner planted on a "sandy loam" (see FARMER of December 15th) and he of Pennsylvania on a clay loam; or, to be more explicit, thirteen used a sandy loam; one a clay loam; six gravelly; one alluvial; one dark red; four stony; one slaty; one light; one yellow; two black loam; two sandy and gravelly; one free loam.

The Tennessee Experiment Station Report for January, 1890, announces that "large and whole tubers produced smaller and poorer merchantable ones than did parts of medium tubers or single eyes." "Given two potatoes of equal size, one planted whole will not yield so large nor so good a crop as will the other tuber cut into halves, and each part planted separately in a single hill."

After this, comes the question of the manure to be used, and the following analysis of the potato tells the tale of that: Potash, 59 per cent.; soda, 1 per cent.; magnesia, 4.5 per cent.; lime, 2 per cent.; phosphoric acid, 19 per cent.; silica, 2 per cent.; chlorine, 3 per cent. And it seems there is little difference whether the manure is put under or over the potato.

As to cultivation, it must be governed by the season and the soil. In a wet season and a damp soil hilling would be best to keep the water from standing around the hills. In a dry soil and a dry season that cultivation must be followed that will prevent evaporation, and ward off the effects of drought.

W. C. A.

The Farmer of the Future.

At present he is an enigma. Heretofore tractable, patiently plodding along, meekly carrying the butt end of every burden; bossed about by those who looked upon him as their natural prey; too busy toiling to make both ends meet to get time to attend the grange, alliance or farmers' club, and only taking an interest in politics when the political "rounders-up" made their annual visit to each cross-roads shortly before election time, and then piously voting the ticket his father and grandfather voted, without being able to give any other reason for doing so; willing to leave all laws and law-making to those

who followed that lofty profession for a livelihood; perfectly content if he was allowed the right to live. Looked down upon with contempt by all other professions as the natural pack-horse for every public and private burden, legislated and discriminated against in the interest of "pets of the government and state," he has at last made a stand, and shown fight after a long chase in bringing him to bay. Now that he is being thoroughly aroused, his dander up, and war paint on, he proposes to make things lively in future, in showing his hand whenever and wherever he has an opportunity.

Thanks to an enlightened public sentiment largely due to the educational features of farmers' organizations throughout the land, but mostly owing to the urgent necessity for determined action upon his part in matters pertaining to his welfare and that of those dependent upon him, the farmer of the future will be a more aggressive, capable and intelligent citizen and voter from the severe schooling he has been and is still being compelled to pass through. "His definition of justice" so forcibly illustrated in a recent number of the *Rural New Yorker* as "equal rights and honest share," bodes no thought of evil or injustice to any other calling, but is a modest but firm demand for what are his just dues. Having felt the power of united action in politics at the last elections, he proposes in future to press the issues and force the fight.

That his methods are crude and his experience limited, his warmest admirers cannot but admit. But that symmetry, beauty and perfection will eventually adorn the form of the new goddess of liberty now being hewn from the rough, none of his revilers and persecutors will have the temerity to deny.

The farmer of the future will not be merely content as a hewer of wood and drawer of water, but will look to a higher and better development of his calling and condition. His present condition of depression and imminent ruin comes from too much confidence in others to do his thinking and law-making, and his present beligerent and independent action in kicking over the traces of the two old parties, follows as a natural result of this continued betrayal of confidence, and politicians will find it a more difficult job pulling the wool over the eyes of the guileless hayseeder of the future than of the past.

As the agricultural interest of this great nation is the keel upon which rests our grand and beautiful ship of state, so let the old ship be guided through the breakers of destruction that this magnificent foundation upon which she rests be not injured to the sure destruction of all on board, and having defined justice correctly, it is, "Forward! farmer, go up head." R. S. C.

Seeding and Planting.

In nothing are farmers, and good intelligent ones at that, further behind than in the adaptation of the variety of wheat, corn, oats, to their soil and to the time it is done. Yet nothing is more clearly ascertained than that the time of seeding and planting in an average number of years will suit a particular soil better than any other.

A farmer, now dead, whose soil was a very light yellow sand, and a black sandy loam, for years finished planting his corn by the first of May as a rule, and scarcely ever failed to make a crop. His corn was white on the black land and the level, yellow on the hills and sand.

Even now we see our truckers recommending different varieties of strawberries as better adapted to one soil than another. Years ago Gov. Stevens and Col. Lloyd, of Talbot, varied in their wheats; one seeding Mediterranean, the other "blue stem," from the conviction that each did best on their lands, one a light red clay, the other a stiff white oak soil. Now that varieties of wheat have increased so very greatly, and have been brought from many sections different in soil and climate, there seems to be no reason why farmers should not turn their attention to these questions; certainly none why the experiment station should not give it a trial.

As we write, the fact occurs to us that here yellow corn is two weeks earlier in maturing than white, and that it generally will stand much more rain without serious injury. But it needs to be stated that the yellow corn referred to had a smaller ear and a lighter colored grain than that of to-day. The white corn, too, was usually red cobbled and easily shelled. Indeed it is a fact that as a whole there is less attention to selecting seed than formerly, probably from the fact that the use of fertilizers and other manures has given rise to the opinion that they compensate for the selection of indifferent seed.

On another farm in our mind's eye the white has ever outgrown the yellow whenever planted. And even this has sadly degenerated from that formerly planted, which had been selected for years and had been made a distinct variety by mixing two distinct varieties, and from the cross making a new one better suited to the soil.

On this same farm nothing has been so distinctly noticeable as that the time of planting makes or mars a crop. This becomes apparent as it has had different tenants each planting at a different season, and frequently with different varieties, and always ending with a great difference in the amount produced.

As then, weather and other accidents control to a certain extent the farmers' time of planting, as different soils produce more when seeded, or planted, with one variety of corn

than another, it would seem the part of a wise system of farming to use every endeavor to suit the seed to the time of seeding, and to the soil.

As has been stated on more than one occasion, a deteriorated soil grows spontaneously different grasses, weeds and trees from a rich one, so should we take the hint and endeavor to suit our crops to the varying conditions. Assuredly we are not doing it, nor scarcely making the endeavor. For one I am thoroughly conscious that I have failed to do my duty in this line, and have reaped the penalty, although doing far more than my neighbors.

A. C.

Making Richer Manure.

A large part of the value of fertilizers is due to the promptness of their action. Stable manures are always proverbially slow. They are composed generally in great part of coarse straw or other material used for bedding, and except from grain fed animals, the excrement contains a ridiculously small proportion of available plant food. Fresh dung is not available until some fermentation takes place. Until warm weather incites this, the stable manure does little good. After the heats of summer begin, the coarse manure in large amount may even injure crops by increasing droughts. The manure applied in spring is often only brought into soluble form by autumn, when fall rains and winter snows are ready to wash away its most valuable portion into ditches and rivers.

We believe heartily in stable manure, but it is no detractor from its value to wish it were more immediately available. Two ways are open for doing this, one indirect, by feeding richer foods containing more nitrogenous and mineral elements, and the other direct, by adding to the manure pile potash, phosphate and nitrates in the concentrated forms in which they are furnished in commercial manures. This is what may often be done with great advantage. Stable manures are generally apt to be deficient in phosphate, and the commercial phosphate contains at best only very small proportions of ammonia, though this rather than the mineral is what gives grain its more vigorous growth at the start. In all ammoniated phosphate there is usually only about two per cent. of ammonia, or in a dressing of 150 pounds per acre about three pounds. It is evident, therefore, that a mixture of the potash with the stable manure benefits both, by making and keeping both in available condition for crops.

A still greater improvement to most manure heaps is the addition with the phosphate of a dressing, say of twenty-five pounds of nitrate of soda evenly distributed to each load of manure. Eight loads of such manure per acre would give a dressing of 200 pounds of nitrogen

in available form, and do any crop more good than either the phosphate or stable manure alone could possibly do. What is wanted in stable manure is a tendency to decompose rapidly, and nothing better promotes this than nitrate of soda. Phosphate alone is liable quickly to revert to insoluble forms, and nitrate of soda is the best preventive of this. The nitrate of soda is more expensive per ton than commercial phosphate, but is much more effective for immediate results, and a comparatively small amount per acre will produce a great increase of crop. Since the discovery of nitrate beds in South America, this fertilizer can be procured much more cheaply than was thought possible a few years ago. It can now be had for \$50 or \$60 per ton, and possibly less. In appearance it resembles common salt, and should be made as fine as possible before distributing, as a little will, for most crops, be sufficient if it reaches them at all.

In every case where nitrate of soda or phosphate is used to enrich manure, clover should be sown if it is with a grain crop, so as to leave something on the land after the crop is removed. The nitrate is very soluble, while the phosphate is liable to revert and become useless until made soluble again. Clover roots prevent the loss of nitrates, while they greatly aid the solubility of the phosphate which the soil contains. Soils long cropped with wheat produce good crops when clover is grown on them, though only the roots are left in the soil. Owing to its solubility it is better to defer the application of soda to land until spring, as otherwise much of its value will be washed away by floods that often occur the latter part of winter as the snow goes off and the land is filled with water.—*Am. Cultivator.*

Live Stock and Dairy.**Cleanliness and Comfort About the Stables.**

When you go into a barn-yard and see the stock, including the milkers with their limbs and flanks thickly coated with accumulated filth, you are not apt to be favorably impressed with the habits of their owner. It is evident to you that there is but little provision made about the stables. For neglect of this very important care, the animals not only present the untidy, unsightly appearance described, but during the winter they are made very uncomfortable, lying in their miry, cold places, which is a loss, for more food is required to keep up the animal warmth. Such instances of neglect are not uncommon over the country, though we are glad to say they are every year becoming less frequent as more and more is said in farm papers against them. The owners of stock who are getting along in this slouchy way will say in extenuation of it, that bed-

ding materials are expensive and that he cannot afford to use them, it would take away all the profit. We think he fails to get the profit by such neglect. On every farm, if the proper care be exercised, enough materials in some shape or another ought to be housed in the summer or fall to serve all the needs of the stock to make their stables dry, comfortable and cleanly. Rye and wheat straw may be economized for feeding; still, that the stables of the milk cows may be kept in proper condition to subserve both warmth and cleanliness, a portion of it should be set apart for this purpose, unless large quantities of coarse marsh hay can be had, or, better still, an abundance of forest leaves.

We know a very provident and therefore a successful farmer who regularly, after the leaves have fallen in the autumn, gathers up all he can find of them either in the woodland or from the grove surrounding his dwelling. These he stores away and when the rains come down and the snows drive about his barn, they serve him in good stead. His cattle are always cleanly and in good condition, and when the spring comes round he has a large manurial deposit of rich vegetable matter to draw upon for his crops, and he can thus greatly lessen his supplementary commercial fertilizer bill. Have you any forest leaves that might be gathered up even at this late time? We are speaking now more particularly to the farmer who finds great difficulty in making "buckle and strap meet," and so are compelled to husband every resource however small.

We have often wondered what customers in towns and cities who consume milk or butter from such dairy establishments as the ones alluded to in the foregoing remarks would say if they could go and see the actual condition of things.

Treat the Young Heifers Well.

Years ago it was the custom of many farmers in Maryland and Virginia to put their heifers on short rations during the winter by turning them into the old worn-out fields, grown up with pines and cedars, that they might browse their branches and so get their living independent of the corn stalk rick. They claimed for this treatment that the animals would at least keep alive even if they did not accumulate any fat, and would be ready to pick up and recruit with the spring grass. The result was, they never got over the winter's stunt, and their owners never had anything but scrub cows for their supplies of milk and butter which was of meagre yield and which they had to sell at low prices, because of inferior quality. But this was not the only way in which they were the losers by their improvident way. If the animals had been kept up and liberally fed, their droppings instead of being wasted over the barrens would have helped very much to

enhance the value of the manure. Occasionally, even at the present time, farmers, or rather apologies for farmers, may be found who still cling to the same custom and are content, notwithstanding the progress in agriculture which they see around them, if their heifers are just alive when the winter is over. But this stand-still business, which is a money losing one all the time, must give way everywhere to the better, because more humane and certainly more sensible and profitable plan of keeping the calf pushing and advancing from the time it is weaned by generous and careful treatment until it becomes a milker and fills the pail and yields the golden butter at a paying price. Starvation treatment is not good for man or beast.

The Dairy Form.

Mr. T. L. Hacker, of Madison, Wis., has written a quite interesting article in the *Breeders' Gazette* of Dec. 24th, on the "Dairy Form" in cattle. He illustrates his ideas by drawings of noted Jersey cows, showing their marked agreement in certain specified points of form.

When the *Dairyman* first took up the discussion of this question together with that of the "nervous or dairy temperament," several years ago, there was a much greater degree of confusion prevailing among dairymen as to the true form of the dairy cow than at present. The "general purpose" idea of a dairy cow prevailed then quite generally. This prevented the formation of clear and distinct ideas of form or purpose. But "special purpose" ideas are beginning to prevail among dairymen, as among horsemen; and the dairy ideal is no longer "void and without form."

In discussing this question we should always establish in our minds:

1. An understanding, as far as possible, of the function of the dairy cow.
2. We should endeavor to understand the laws that govern the exercise of the dairy function.
3. We should understand that with the cow, as with all machines having a specific purpose to perform, function modifies and establishes form.

The old Arab maxim concerning the horse was: "Form is everything to purpose." It is true of the horse; it is true of the mowing machine; it is true of the sewing machine, and just as true of the perfect dairy cow.

Both the breeder and business dairyman are learning the important lesson that they must first look into the cow to understand the laws that govern the exercise of her functions; and then look at her, to discover how far function establishes and modifies form. The cow must be studied from the inside first. The modern dairy cow is an animal which by virtue of intelligent breeding and handling has come to have

an enlarged capacity or function for dairy performance.

To possess a safe and profitable judgment of the dairy cow, it is necessary to establish in the mind an outline of the true dairy form, basing that outline on the laws which govern the action of specific dairy functions. We then have a "reason why" the possession of the desired function is indicated by the form. No horseman would select a horse with a draft-horse form, for racing purposes. No intelligent hunter would select a fox-hound, for hunting purposes, that had a nose and body shaped like that of a bull dog. The long line of breeding and exercising for a special purpose has established specific functions; and function has, as we said before, established specific form. In all animals, the more highly developed the capacity or function in a given direction, the more distinct becomes the form indicative of that function. This is not saying that the desired form always indicates the exercise of the desired function.

With cows, as with men, the power or ability to do can only be determined by the doing. The form may be perfect and still the power to do be lacking. The wise judge of cows must never underestimate the indicative value of form, but he must look deeper for the evidence of power or ability to make that form execute its purpose.

—Hoard's *Dairyman*.

Poultry Yard.

Breeds of Poultry.

Now that poultry raising and egg producing have become such a large business, and so important a one in some sections of the county, the following, taken from an agricultural report, exhibits the characteristics of the different breeds in such a way as to afford a clear idea of their merits: *Hardy*, Brahmas, Houdans, Hamburgs, Crevecoeurs, Spanish, Leghorns. *Delicate*, La Fleche, Polands and Bantams. *Domestic and quiet*, Brahmas and Cochins. *More vivacious*, Spanish, Leghorns and Dorkings. *Active*, Hamburgs and Games.

SIZE.—*Large*, Brahmas, Cochins, La Fleche, Houdans, Crevecoeurs and Dorkings. *Medium*, Polands, Spanish, Leghorns and Games. *Small*, Hamburgs and Sultans. *Diminutive*, Bantams and Silkies.

Eggs.—*Large*, about seven to a pound, La Fleche, Houdans, Crevecoeurs and Black Spanish. *Medium*, eight or nine to a pound, Leghorns, Cochins, Brahmas, Polands, Dorkings, Games and Sultans. *Small eggs*, nine or ten to a pound, Hamburgs. *Great layers*, Hamburgs, Spanish, Leghorns and Polands. *Good setters*, Cochins, Brahmas, Dorkings and Games. *Non-setters*, Houdans, Crevecoeurs, La Fleche, Spanish, Polands, Hamburgs and Leghorns. *True table birds*, La

Fleche, Houdans, Crevecoeurs and Dorkings. *Less juicy*, Cochins and Brahmas.

Of course, there will be found various exceptions to this classification, because tastes will differ, and each one is likely to think his own breed the best. The list is defective in that it does not include Plymouth Rocks, Wyandottes, Langshans and Dominiques, now so popular. It is a question if our dominiques, rumpless and duck-legged fowl are not the peers of any of them in hardiness and egg-producing qualities, if not in size, early maturity and eating qualities.

Horticulture.

Raspberries, Blackberries and Dewberries.

These three fruits, though appreciated by all, seem to be the most neglected.

The raspberry (*Rubus*) belongs to the rose family, and has several synonyms among different peoples. The Scotch raspis and German kratzberre (scratchberry) illustrate the prickly condition of the stems of the plant, and indeed, they are very much like rasps, only more rasping. The Greeks first mention the raspberry, its habitat being Mt. Ida (*Rubus Idæus*). Pliny mentions this plant A. D. 45. Paladius, a Roman agricultural author, mentioned its cultivation in the fourth century. The most of our kinds are products from *Rubus Idæus* (foreign), *Rubus Strigosus* (native red) and *Rubus Occidentalis* (wild black) native. The fruit is borne on biennial stems. The flowers of this plant are of exquisite sweetness, and when in bloom the honey-loving part of the insect kingdom literally swarm the bushes.

Warm, well drained, somewhat moist and rich land suits the raspberry the best. The planting can be done either in the fall or early spring; if planted in the fall, a mulch of long stable manure should be placed around the newly set plants to prevent heaving out by frost. The mode of cultivation best suited to these plants is as follows: The soil should be plowed deeply and thoroughly pulverized by harrowing, a good supply of bone dust sown broadcast and harrowed in will be very beneficial. The rows should be at least six feet apart, and the plants set three feet apart in the rows. Plant two inches deeper than what they were in the nursery. Good cultivation after planting is very necessary, also occasional hoeings, to kill all weed growth; cultivate the ground level, and do not throw up in ridges. Working the ground should cease after the berries are formed, until after the crop has been picked, when the plantation can be cultivated until October. The shoots should be pinched back as soon as they are four feet high, which will cause them to produce lateral branches

which will be loaded with fruit the next season. Stakes can be driven along the rows twelve feet apart on which galvanized wires four feet from the ground can be strung and the shoots tied to these wires, which will prevent the winds and snows from breaking down the plants. This method of tying up will prevent the plants from sprawling on the ground and the berries from being splashed by rains. It also gives a neat appearance, and ample space will be thus made for working with a horse. Four to five canes are enough to leave in a hill, the others which appear from time to time should be cut away. After the canes have fruited, they should be cut out so as to give renewed strength to the remaining ones, to become well developed and strong for the next season. The entire plantation should receive a top-dressing of well-rotted manure in the fall.

Raspberries are propagated by taking up and planting the suckers, by root cuttings and from the tips. This last means of propagation is nearly confined to the black varieties, although the Shaffer, a red kind, can also be increased in this way. In this mode of increasing, the tips of the shoots should be covered lightly with soil, and where well rooted, can be cut from the parent plant, when the points of the branches begin to swell, and not until then should they be covered with the soil. Many varieties are named in the catalogues, but for this locality I would name eight kinds, which will give variety and satisfaction: Cuthbert, Turner, Shaffer and Marlboro (red), Golden Queen (yellow), Souhegan, Gregg and Mammoth Cluster (black). It is doubtful even with these fine improved kinds that we will be so impressed as we were by the little wildlings of our juvenile days, plucked in some secluded shady nook along woodland and ravine.

Blackberries.

The name suggests itself at a glance; it is doubtful whether this color is more typified than in this berry. This berry also belongs to the rose family, *Rubus villosus*, high blackberry, a native of this country and found almost everywhere. The fruit of this plant is also borne on biennial stems. The same treatment can be given to this plant as to the raspberry, and success will follow, except it will require less manure, and three stems for hill instead of four or five. The soil, planting, cultivating, tying up, pinching and removal of the stems after fruiting is the same as the raspberry—propagated by taking up the young plants and by root cuttings.

The kinds best suited for Maryland are as follows: Kittatinny, found near the mountains of the same name in New Jersey. Erie, a new and wonderful berry, and one I can recommend heartily. Snyder and Stone's Hardy, both exception-

ally hardy and profuse bearers, and the Lawton, a fine and prolific variety.

Dewberry, (*Rubus Canadensis*), the trailing blackberry, is found growing wild in Canada and the States. The variety Lucretia is an acquisition which all should possess who have space for berries of any kind. The individual berries are about two inches in length, very large, of exquisite flavor and highly perfumed, and fit for the gods. The soil which suits the high blackberry will answer for this. The rows need be but four feet wide, with the plants three feet apart in the rows. The long trailing stems should be trained on wires two feet from the ground on posts, to prevent the plant from creeping on the ground and the fruit from being splashed by heavy rains. The dewberry can be propagated in the same manner as the black raspberry, from the tips of the stems. The ease with which these fruits can be cultivated, and the wonderful returns which can be realized by patience and a little labor, leave one without plausible excuse for the neglect so often seen in the management of plantations. The possibilities which could be realized by growing these berries ought to stimulate cultivation of them. W. D. HAMILTON.

Govanstown, Md.

The Grange.

National Lecturer's Department.

One of the results of farmers working together in the Grange, was the elevation of the Bureau of Agriculture to a Department of the Government with its head the secretary of Agriculture, and a member of the President's Cabinet, but there is more work for the farmers to do in that same line in order to reap all the benefits of this advance step.

Appropriations.

During this, the short session of Congress, the most important work that is expected to be done is that of passing the appropriation bills, by which the different departments of the Government may be able to secure the sinews of war to keep them in good running order. I have been looking up some of the figures, past, present and prospective, and from a farmer's and Patron's standpoint, I find some of them full of interest, containing some pointers that should set farmers to thinking and acting.

We now have eight regular departments of the Government, the heads of which form the President's Cabinet. To these may be added the Legislative, meaning Congress, all of which are supported by the appropriations made from year to year. I will give the figures of the appropriations made for each for 1890, and immediately following, the estimates for 1891, as contained in the bills to be acted on within the coming two months:

	1890.	1891.
State Department.....	\$2,477,686	\$1,981,435
Treasury.....	130,661,369	127,030,989
War.....	38,608,626	47,052,073
Navy.....	24,347,220	26,440,159
Interior.....	112,784,818	117,054,420
Postoffice.....	2,072,329	9,119,131
Dept. of Justice....	4,816,002	4,800,700
Dept. of Agriculture.	1,080,037	1,208,430
Legislative (Cong's)...	6,358,042	6,429,583

There is plenty of food for study and thought in these figures. Over seventy times as much spent in the army and navy as for agriculture at a time when we are at peace with all the world, so strong within ourselves that no nation on the earth dare attack us. Six times as much spent for the months Congress is in session as for the great industry which is at the foundation of all our greatness, and that feeds and pays for running all the machinery of Government, manufactures and commerce.

In Other Countries.

How do other countries look after their agriculture? Let us see. We will take seven leading nations, and first give their area in square miles and their population, and second, the annual appropriations for agriculture according to the latest available figures:

	Area sq. miles.	Popu- lation.
United States.....	3,570,271	62,000,000
Great Britain.....	121,438	38,000,000
Germany.....	208,725	47,000,000
Brazil.....	3,287,973	13,000,000
Russia.....	8,539,136	109,000,000
France.....	204,096	38,200,000
Austria.....	115,830	23,000,000

Appropriations for Agriculture.

United States.....	\$1,089,037
Great Britain.....	1,500,000
Germany.....	2,850,000
*Brazil.....	20,000,000
†Russia.....	14,000,000
‡France.....	8,000,000
Austria.....	4,000,000

*Agriculture, commerce and public works.

†Agriculture and mines, Asiatic Russia included.

‡About the same for five years past.

Let us figure a little and see how we come out. For each square mile of our territory we appropriate the vast sum of about *thirty-one cents* for agricultures. While Great Britain appropriates about \$12.75 for each square mile, for agriculture, or about *forty-one times as much* as we do. Germany appropriates more than Great Britain, while France appropriates nearly *forty dollars* for each square mile within her limits, or *nearly one hundred and thirty times as much* as the United States. Where is agriculture more prosperous, more advanced, better understood than in France and Germany? Thinking farmers and Patrons can do some more figuring on the tables I have given. And there will be but one conclusion, viz.: We labored for long, long years to have our Department of Agriculture elevated and broadened. We succeeded. It is one of the *Departments* of our Government; its head is a member of the President's Cabinet. But its appropriations are less than are

given to some of the small bureaus in other Departments. We have broadened it, now let us sustain it with means equal to its importance as compared with other Departments, and equal with its importance in benefiting *all* the people of our country; for upon a prosperous and successful agriculture depends our present and our future greatness as a nation.

A Few Good Things.

I wish to point out a few of the good things already accomplished by our Department since it has been enlarged and broadened, and offered as reasons why it should have larger appropriations in order to have it continue and extend its good work.

Next July the Weather Bureau will be turned over from the War Department and will become a part of the Department of Agriculture and thus one more of the appliances of war will be changed to the pursuits of peace. This adds to the work, and surely to the usefulness of the Department of Agriculture.

On either one of four different counts the Department of Agriculture has performed work that is worth annually millions of dollars to farmers, and benefit to all our people.

First. It has stamped out pleuropneumonia among our cattle and by wise legislation it asked of Congress, is compelling foreign nations to admit that our beef is healthy and therefore forces them to remove their "restriction" and opens up our markets abroad. The same system of inspection is doing and will continue to do the same for our pork and hog products.

Second. It imported the little parasite that has destroyed the cottony scale insect that was killing the orange and lemon trees of California, and that was destroying millions of dollars of capital invested in groves, and has stimulated new planting of hundreds of thousands of trees, and millions of dollars will be the annual reward to farmers on this count.

Third. Its investigations, covering several years, and the most patient and persistent labor, into the "peach yellows," that is threatening another great industry in several states, where millions of dollars are again at stake, already give promise of success.

Fourth. Through the Department of Agriculture came the instructions and formulas for spraying our fruit trees and vines to save them from insects, blights, mildews, scabs, rot, etc. It was worth millions of dollars to the grape crop this year, and has raised the hopes of thousands of despondent grape growers, and the careful orchardist can now gather his apples and pears, beautiful in form and color, and no longer marred by rusts and insects.

These are only a few of the many counts that could be made. There is much more to be done. Let the words of Secretary Rusk himself

cheer us onward: "I look forward with courage to the work that lies before us in the future and with confidence to the time when, in the highest quality of its work, as well as in the magnitude of its enterprise, the agriculture of the United States shall not only lead all other industries in this country, but shall be the leader in this great industry of all other countries."

Maryland Granges.

SPRINGVILLE, No. 158, Carroll county, Md., elected its officers December 20th, 1890, and they were installed January 3d, as follows: M., Ephraim Shearer; O., Jacob F. Shearer; Lec., Jos. R. Miller; St., John W. Hoffman; A. St., E. W. Hains; Ch., John L. Wertz; Tr., W. H. Shearer; Sec., J. D. Shearer; G. K., H. H. Shearer; P., Mrs. Ephraim Shearer; F., Mrs. J. W. Hoffman; C., Mrs. J. F. Shearer; L. A. S., Mrs. W. H. Shearer.

OLNEY, No. 7, Montgomery county, has re-elected as Master John C. Bentley, and chosen as Secretary Elizabeth T. Stabler, to succeed Mrs. Charlotte H. Farquhar, who has for so many years filled the post in that strong and vigorous grange with intelligence, promptness and tact, illustrating with emphasis, what has often been observed, how advantageous and conducive to good work it is to any grange to place a sister with those qualities in the Secretary's chair.

Crop Statistics for 1890.

The estimates of the products of corn, wheat and oats of 1890, as computed by the statistician of the department of agriculture, make corn aggregate 1,469,970,000 bus.; wheat 399,262,000 bushels; oats 533,621,000 bushels.

The area of corn was reduced, by utter failure and abandonment, by more than six million acres, the area harvested being 71,970,762 acres. The average yield per acre was 20.7 bushels, and the supply for consumption per head of population is twenty-three bushels, or eleven bushels less than last year. The aggregate wheat area is 36,087,154 acres, nearly the same as in 1879, and the yield per acre 11.1 bushels. These are measured bushels, of a quality grading somewhat lower than usual, the weight of which will be given in the March report. The yield per acre is the same as in 1887, when the product was nearly 415,000,000 bushels, and with two exceptions is the largest rate during the past decade.

The area in oats was 26,438,369 acres, and the yield per acre was 19.8 bushels. This is only seventy-four per cent. of the average of ten years past, which was 26.6 bushels and the smallest rate of yield ever reported.

The American Farmer

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"AGRICOLAS." Virg.

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At the office of THE AMERICAN FARMER are located the offices of the following organizations, each of which its proprietor, Wm. B. Sands, is Secretary:
Maryland State Farmers' Association
Maryland Horticultural Society.
Maryland Dairymen's Association.
Maryland State Grange, F. of H.

BALTIMORE, JANUARY 15, 1891.

Clubs and Renewals.

To our friends who have already forwarded these our thanks are due and gratefully tendered, and to others we renew the request made in our last issue for early attention to the same, as their convenience may allow. A substantial encouragement, which would bear fruits all around, would accrue from our present subscribers doing what ought to be found entirely practicable—each adding one new name to our mailing list.

REMEMBER, there is a standing invitation to all of our readers to contribute to the pages of THE FARMER their experiences and observations in every department of farm activity likely to be useful or interesting to others. It is not the function of a farm paper to teach farming, which cannot be done by print, but one of its most important uses is to disseminate information of the new processes, improved methods and short cuts, by which some have succeeded, and of which others ought to be advised.

It will be courteous, as well as convenient to us, that subscribers wishing the copies of the paper sent them discontinued will send us a postal card, or request the postmaster to notify us, and not as is sometimes done, accept the papers until they receive a bill therefor, and then say they wished their paper stopped months before.

Mending Up.

The farmer who is always looking ahead and providing in time for emergencies, is the one who is sur-

est to succeed in his occupation. For instance, through the winter months, when there is comparative leisure for him, and knowing that when the mild spring days shall open, the ploughs ought to be got out of their shelter and set to turning the furrows, he carefully examines them and sees if they are in proper order for their work; and if not, he has them put in order by supplying a new point or share, or a missing bolt or rivet or screw or any other deficiency, then on the morning needed they will be ready for a good day's work, and hours will not have to be spent in tinkering up, hands will not have to wait for repairs and the patience will not be tried by the vexatious delay. This we consider will be a great thing gained by wise forethought and timely provision.

The plough harness, too, might be overhauled, oiled and mended, if out of kelter. A stitch in time, remember. Materials for mending cost but a trifle. A box of copper rivets, a few awl blades and large sewing needles, a ball of shoe thread and a piece of wax. Two dollars will buy a whole outfit and some leather into the bargain. A clamp for sewing is readily made of two barrel staves and a small block of wood. Money saved is money earned, says the old proverb, and no class of our people needs to heed its truth more than the tillers of the soil.

THE success of Mr. Beall in growing potatoes, and in recognition of which he received a handsome piece of plate from the Vansville Club, of which he is a member, is suggestive of the opportunities which open up to the residents of the country lying between Baltimore and Washington. This whole tract ought to become one great market-garden, and a few examples like Mr. Beall's will stimulate efforts in that direction. Washington is growing rapidly and is one of the best markets in the country, and much of the land within easy reach of the city is phenomenally cheap and exceedingly easy of amelioration. One of the pushing real estate firms of that place, Messrs. Geo. H. Calvert & Co., whose advertisement appears in our columns, has had printed in large quantities and circulated as a trade circular, to attract attention to that region, the official descriptions by Col. Scharff, the Commissioner of the Land Office of Maryland, who describes each county in detail, narrating its advantages, material and otherwise. There is a great field here for energetic and deserving immigrants, whether from abroad or from the ice-bound regions of our own land.

The Montgomery County Farmers' Convention.

The 19th Annual Convention of Farmers will be held at Sandy Spring, Md., on Tuesday, January 27th, '91, at 10 o'clock, A. M. In

addition to reports from the clubs and committees, there will be discussions on the following questions: 1st. What practical means can be taken to separate party politics from county affairs, that citizens may receive better results from the money expended? 2d. Will it pay the average farmer, financially, to participate in the average county fair? 3d. Is the use of barn-yard manure as a top dressing for wheat the most profitable way of applying it to the land? 4th. How can the fertility of land be maintained where hay is the principal crop sold? Mr. B. D. Palmer is President, and Messrs. Francis Snowden and Chas. E. Bond Secretaries.

Maryland County Societies.

FREDERICK.—At the annual meeting of this society the following officers were elected for the ensuing year. President, Col. D. C. Winebrener; vice president, Chas. N. Hargett; recording secretary, George Wm. Cramer; corresponding secretary, H. C. Keefer; treasurer, Wm. S. Miller.

HARFORD.—The stockholders of the Harford County Agricultural and Mechanical Society held their annual meeting recently.

Mr. Walter Finney, Treasurer, read the financial report, which showed that there is a mortgage on the society's property amounting to \$5000. The premiums due and unpaid, including the 20 per cent. withheld from exhibitors of stock, amount to \$163.20. There is a balance of \$51.84 in hand. The total indebtedness of the society, including interest due on the mortgage, taxes and insurance is about \$5,300.

Jos. B. Hanway and Edward H. Hall, Wm. F. Reasin and Robert A. Mitchell, Wm. L. Amoss and A. M. Fulford, Dennis H. Standiford and James B. Luckey, George W. Jones and James P. Streett, John A. Russell and Murray Vandiver, were elected directors for the year 1891.

THE WASHINGTON COUNTY SOCIETY has elected the following officers: President, John W. Stonebraker; Vice-President, Geo. W. Smith, Jr.; Recording Secretary, P. A. Witmer; Corresponding Secretary, C. F. Manning; Treasurer, C. E. Baechtell. Board of Directors: P. H. Wingert, George M. Stonebraker, Solomon B. Rohrer, John M. Brown, Dr. A. S. Mason, Dr. J. McP. Scott, Geo. B. Cearfoss, Lewis R. Schnebley, Benj. P. Rentch, Victor Newcomer. Its financial statement just published shows that after having expended last year over eighteen hundred dollars in permanent improvements and liquidated mortgages, notes and old bills, to the extent of twenty-four hundred dollars, and paid about eleven thousand dollars of current expenses there yet remains a net surplus of about five hundred and fifty dollars in the treasury.

HOME DEPARTMENT.

The What To Do Club.

OUR MOTTO.

Do what you can.
Not what you cannot:
Not what you think ought to be done,
Not what you would like to do,
Not what you would do if you had more time,
Not what somebody else thinks you ought to do.
But, do what you can.

It is for us to answer, present! to the roll call, I presume, whether we are ready to roll up our sleeves and go to work or not.

It is best to be in the swim any way; we will then be able to say our club, and if it is credited with doing any great things it will be *we* who did it. Here I am, then, with the best intentions and in a thorough good humor which goes a long way toward making things run smoothly. Suppose I offer a resolution at this meeting, that we, members of this "what-to-do club", pledge ourselves, each one to do our best to *keep the rest in good humor*. I don't know a better way of cultivating our own. I know I can rely upon *Sally Lunn* and *Jon E. Cake* to second this motion, because they seem somehow to be yoked together, and running a race upon that line, and there are several others of our number who seem in a constant bubble of good humor. So we will consider the resolution adopted and proceed to business.

The first thing is to try to impress upon our minds the value of the resolution just adopted. It seems to me a part of our duty in life to promote the happiness of other people; and who can be happy if out of humor—which means a state of ill-humor. We talk and meditate a good deal upon our own state of mind or temper, without considering how largely we influence the mind and temper of other people. It would be far better for ourselves, and those we have to do with, if we tried the other track, and exert ourselves in behalf of those we think need our help most. Perhaps we may be impressed to discover that they no longer need our services, because we have ceased to look out for ourselves. HELEN BLAZERS.

AMANDA A reports "present!" but asks to be excused from duty while she meditates upon some things she has gathered during a long absence from home, and at the same time sets her house in order.

WE have had, as many do, I suppose, trouble with closet under the sink in the kitchen. In spite of all the precautions we could take, it would be damp and mouldy and ill-smelling. In a moment of inspiration, one day, we suggested that the closet be abolished entirely, and having another, that would hold the kitchen utensils that we wish kept out of sight. We acted upon this bright thought, and the result was more than satisfactory. The doors and side pieces were taken away, and the room had light in any corner that could be kept clean with the rest of

the floor, instead of the dark, mouldy closet.

For a serviceable dish cloth, take a pair of men's heavy hose, cut down the seam and middle of the sole, open, and place one upon the other. Put the two under the sewing machine and run several rows of stitching. You will be surprised to find how long it will last.

BUSY BEE.

IN answer to Pomona, I would say that hot cakes do not suffer from being baked in advance if they are buttered as soon as baked and set inside the oven till ready to be served. The plate on which they are piled is then also hot, and there is no steaming as when piled without buttering. This rather improves waffles. I am glad she has introduced the subject of table serving, we will talk it over in our next meeting.

C.

I AM glad to see you call the roll, as I think the response may be better for it. Do you object to an increase of your members? I would like to be one of your number if I felt I had the time to devote to such work; but, being my own farmer, housekeeper, sometimes cook and washerwoman, I do not find much time for writing. My social duties and church work give me much writing to do, as I am secretary for two societies. Do I hear you say, then, why do you wish to increase your labor? I feel this way: I wish to know the sisters better and have one feeling in common with them.

The pleasant ring of "Merry Christmas" and "Happy New Year" is over. The duties of the year are beginning, and of course many good resolutions have been made, but to carry them out, through the sometimes weary moments, we will find it harder to do; still, with strong faith in Him who rules on high, and the bright star of Hope, much can be done.

Let us try to make our winter evenings as pleasant and profitable as possible. Music in a family, particularly choruses, give much pleasure to old and young; and here let me ask the good sisters if any of them know a book of suitable choruses for ladies and gentlemen to be used at literary club.

I am glad to know Dorothy Doolittle was so fortunate as to hear a Christmas sermon which cheered her heart. Yes, such sermons are refreshing, but sorry am I to know so many people stay away from God's house on that joyous day to assist in preparing a big dinner, which to my mind is altogether wrong. Glad am I to see Ceres' name again; her good words were much missed by the *Home Circle*, I am quite sure. Let me join in the welcome shout that she is now at her old post.

I have taken THE AMERICAN FARMER for years, and it is like an old friend coming into the house twice a month to make a visit.

Asking your pardon for detaining you, I bid you adieu.

BESSIE.

THE flag of the club waves again. The captain is at the helm and gives a friendly greeting to the crew, who with pleasure and confidence are ready to embark on the year 1891, in which they hope to pick up a larger cargo of comfort and happiness than ever before. The advice of our worthy Ceres, when taken on board and stowed in memory with others, she will give as we boom along, will keep us well ballasted for the voyage. A Stranger will not let us live on bread alone, she will supply spiritual food that will make our outfit complete, so, come what may, we are bound to succeed. The all important kitchen will be kept in perfect trim to carry out instructions received from time to time; with such an outfit and a worthy purpose, it will be plain sailing.

I have not the least doubt but what plenty of money is very convenient at times, and some take great pleasure in accumulating it, but the place where to stop before it becomes a burden has not yet been found (judging from others, I have never been in that fix). The pleasure of accumulating seems to keep on top all the time and keeps down the blessing of giving to others that are not so favorably situated. That is in reality the best part of handling money. The plodding farmer is not bothered with anything of that sort; he doesn't place his comfort and confidence in stocks and bonds, but in the Giver of all good, and is dependent only on Him for his daily bread. At the same time he has got to hustle for himself, for he has the promise, "That to him that hath will be given." For my part, when I can lay by the price of an umbrella above expenses for a rainy day I feel comfortable, provided it don't rain so hard that I cannot take some one under it that is caught without one. Not being able to take that precaution the past year, I find it more blessed this year to receive than to give, and am happy to say I have been very much blest.

SALLY LUNN.

How Shall We Use Our Vacation?

There are many ways in which the members of the farmers' household may use this lull in the busy-ness, which is our common lot, pleasantly and profitably. It is our best season for neighborly intercourse, because it is the resting season of men, women and horses, and there is no better rest for us than a social visit among congenial people, while the horses must have healthful exercise all the year round.

It is likewise the season when the frugal housewife takes stock in the clothing and house-furnishing department. Her resources in the way of old clothing are usually overhauled, let us hope in the interest of the poor,

before rugs and rag-carpets. Cast off clothing, that would be a substantial help to some people who are fighting a hard battle with cold and hunger, too often finds its way into these rugs and rag-carpets. It is well to pause before putting the scissors into wearable garment and consider *our duty to our neighbor*. It is our best time to use up all such odds and ends in some way, and a good showing of results from *things past using* is the pride of any frugal housekeeper. But, we need not, indeed should not, give ourselves entirely to such frugality, nor to neighborly festivities, however mild their character. We will get our greatest profit and pleasure from some regular system of mental improvement. When so situated that we can combine with others in some pursuit of knowledge it is no doubt a great help. It keeps us awake to our object, and one mind helps and stimulates another when brought to bear upon the same subject, and to a great extent it thus becomes a pleasurable pastime; whereas, by ourselves, it would seem more like work.

If, however, we are not in the way of having *learning made easy* for us in this inviting manner, we may acquire a great deal during the long winter evenings by ourselves or in the home circle. There is nothing so much neglected in farmers' homes generally as the cultivation of mind. This may seem severe since no people put themselves out so much in order to give their children the advantage of schooling; but, they fail to see that schools and school-books are only stepping-stones by which to reach the real thing. It is after leaving schools that our education really takes place, if we ever get one. If we have been taught to any purpose, we know then what books will give us the best insight of any subject we wish to pursue, and gradually if we have enquiring minds, correct tastes and good habits, we will follow up one subject and then another till we become educated. The helps to this kind of culture are now so numerous and so well adapted to home use that any person with the foundation of a thorough common school education may make of him or herself a *highly educated* person if so minded.

Such help is too often neglected; when our young people *quit school* they are young and thoughtless and need some patience and much perseverance on the part of their advisers in order to keep them on the track—so to speak; the girls turn so readily to the allurements of whatever society is at hand and the boys to something by which they can make money, that they forget all they have learned, and to come back to anything like study is a hardship.

What we should do (and oftenest fail to do) is to provide them at once, and all the time, with reading-matter that will keep their minds upon the

subjects which their teachers have labored to interest them in. If we do not understand fully what is best for them let us consult their teachers privately, and, without making study a duty, make it a pleasure, because it is following out ideas which have already found a place in their understanding.

We plead, that books, newspapers and magazines cost money of which we have so little. So did their school-books and schooling, but we managed some how to provide those, and that much will be almost lost if we now withhold the additional help of good reading at home.

I feel so deeply the importance of this part of the home education that I reluctantly drop it, because of the limits one must place upon a newspaper article. May we all with the new year make a new departure if we have been remiss in that respect, and, with the utmost care to have it of the right kind, indulge ourselves and our families with plenty of reading matter, and time to enjoy it. Nothing will help more to tie them to their homes and to broaden their conceptions of a home-life on the farm.

CERES.

The New Year.

There is something sweet, bright, and hopeful in the sound. New things are not always bright and pretty, but there is some pleasure in the thought that "old things have passed away; behold! all things are new." It seems like starting afresh and leaving all sorrow and care behind; it makes us more ambitious and hopeful, and where the old paths have grown wearisome there is respectfulness in just the thought of a change. We are told to look back over the past—advice that I have often followed and which might be serviceable to some yet in their later days. Looking back has so much of sorrow in it, I feel it is best to press forward to the future with a hopeful trusting heart, feeling sure each day's intentions will lead me to the "prize of the high calling, which is in Christ Jesus." What we want to do is to gather up our resources so that there will be no fragments left; or, if any be left, we may make a judicious use of them, that the great day of account find the balance in our favor.

We may have made lavish expenditure of youth, health, time and influence, wasted opportunities for improvement and for doing good which will never come back to us, and through the chaff of failure and disappointment abound in our harvest of last year, it has passed away.

The New Year is before us, sweet, bright, hopeful; let us gather up the fragments and make the best of what remains. If we wish for the true success, love, joy, peace, let us render a willing obedience to the laws of our being by husbanding our vitality and making the most of our physical

powers, not only to increase the happiness of our homes and our bodily comfort, but to enlarge our capacity for usefulness. True, many of us may have merely fragments of health, but this little can be wove and may be subject to our control. If we are willing to live simply, secure plentiful sleep, pure air, perfect cleanliness, proper exercise and right personal relations. This success is ours and it is a small price to pay for such a boon. We want to gather up the fragments of our influence, our looks, the tones of our voice, habits of life, speak eloquently to those around us, and commend or not that which we profess to the world. If we would give more thought to the power of our daily life and conversation on others we would walk more softly and humbly before the Dear Master and those with whom we associate, and win more souls to crowns of rejoicing.

"For He hath given his pledge divine,
Who winneth souls as the stars shall shine.

The New Year is before you; consecrate yourselves anew. The dictum is plain, "cease to do evil, learn to do well."

"Beautiful lives are those that bless
Silent rivers of happiness,
Whose hidden fountains but few may guess.
Beautiful twilight at set of sun,
Beautiful goal with race well won,
Beautiful rest with work well done.

A STRANGER.

Sand Hills, Augusta, Ga.

Hints and Helps.

Relying on Home Resources.

"My dear," said Mrs. Brown to her obliging spouse, as he was making ready to go to the market town. "I wish you would think to bring me some layer raisins and bananas, a dozen or so of sweet oranges, and a couple of cocoa nuts. We are going to have city company next week, you know, to dine with us, and I want to have something real nice for them, for desert. They are grand folks, and are used to having things more stylish than we farmers, and will expect us to have things very nice for the occasion, so please be sure to get the articles I have mentioned. The oranges you see I will peel and quarter, and the cocoanuts I will grate over them like so much driven snow, and what an elegant dish it will make to serve out with the bananas and raisins."

"Why, wife," said Mr. Brown, good humoredly, "the company you are expecting may have been having this very kind of desert, or something similar served at their table so often, that they may be tired of it, and would prefer something else. The raisins have to be brought from Spain or California, the oranges from Florida, and the cocoanuts from Central America, and I think it would be like having things 'far fetched' as the saying is, to top off a farmers dinner. It might look as if we were

going into extravagances and trying to put on airs; still, I will gladly bring you whatever you wish of the kind. But please let me make a suggestion. You know we have plenty of good milk and cream and eggs and yellow pippins and red streaks, and if you will make one of your delicious rice puddings and some quince tarts and custards, and some of your *à la plus ultra* doughnuts, or any thing else of the like that may please your fancy, you will have, I am sure, what you can serve with far greater acceptance to your guests than all the products of those far off lands.

The good wife, although she had had her mind set on the "store things" as she called them, was a reasonable woman and cheerfully acquiesced in her husband's suggestion; and when the appointed day came, and Mrs. Wilson and her city friends drove up in a handsome turn-out and livery to the door, she was all in readiness for their entertainment. At dinner a brace of plump fat fowls, not the scarred and skinny and wilted kind which city people often have to buy in the markets, but fresh from the coop, filled with savory dressing skillfully roasted and redolent with a most appetizing odor, graced a table spread with spotless linen and set with a quaint but handsome dinner-set of grandmother's time, in which were tastefully served all the desirable accompaniments of fresh vegetables from the garden, such as sweet and white potatoes and the like, and golden dwarf celery. Rolls of white flaky bread were there, and prints of sweet golden butter, and appetizing sauces. After the substantial came the rice pudding, the tarts, the custards and the red streaks and pippins, so that no raisins, bananas, oranges and cocoanuts were needed; and such praises as were bestowed by every guest upon the elegant bill of fare, and especially the tempting articles of dessert, the handiwork of the good housewife of that farmhouse, are rarely given at any festal board. When the friends had taken leave, Mr. Brown congratulated his wife on the success of the dinner, and she in turn thanked him for his practical suggestions.

How often is it that housekeepers in the country think they must depend on the tropics for their articles of dessert when setting up an extra dinner for city friends, instead of relying on their immediate house resources. The story we have told may be of practical value for some of your lady readers.

AN OLD CONTRIBUTOR.

Table Etiquette.

Table etiquette is almost a science nowadays, and it is necessary to conform to its laws. A good rule is to use the fork almost constantly, and put only a little upon it at a time. In this way the food is conveyed to the mouth—never with the knife—al-

though in some countries the knife is still used, even amongst royalty. If you have strawberries and cream, soup, melons, stewed fruit, preserves and jellies, eat them with a spoon. These things, because of their juiciness, cannot be eaten with a fork. Fish should be eaten with a knife and fork, and every well-regulated house, when it serves oysters on the half shell, will place a small silver fork beside each guest's plate. When the hostess serves strawberries with the green stems, then they are invariably to be taken up in the fingers (by the stem) and eaten one at a time. Fruit like pears and apples is first peeled, then quartered, and then taken up in the fingers and eaten. With salads, the knife and fork are used, if the salad has not been cut up before being served. No hostess who understands table etiquette, nor a waiter who has been well trained, will ever think of offering you more than a ladleful of soup, and if you are at a private or fashionable dinner (anywhere except a hotel), and the dinner is too hot, or you do not happen to like a certain dish after it has been served, pretend to eat it, and this consideration on your part will make you the everlasting friend of the host and hostess. Don't stop short and sit back in your chair. That is the most embarrassing kind of embarrassment for both yourself, your host and your associates. These are a few of the things everybody should know.

Recipes.

UNFERMENTED WINE.—Put half a pound of raisins in a stone teapot; add the peel, thinly pared, of a lemon, and the fruit minus seeds and white coating. Pour over all three pints of boiling water and let the teapot remain on the stove for several hours. Drink cold.

BAKED MILK.—Put a quart of fresh milk into a stone jar, cover with writing paper tied down. Leave in a moderate oven eight hours, or until it has the consistency of cream. It is very nourishing and good also for consumptives.

PEA COFFEE.—Dried split peas roasted like the genuine coffee berry, ground and mixed with egg, is a palatable beverage and an excellent substitute for the stimulating berry. Use boiled or condensed milk; have the coffee hot when served.

ALBUMINIZED MILK.—Shake in a self-sealing jar one pint of milk, and the whites of two eggs until thoroughly incorporated, sugar may be added to taste. Water may be substituted for milk, in which case the juice of half a lemon and two teaspoonfuls of sugar is added.

IRISH MOSS LEMONADE.—To a tablespoonful of Irish moss add a pint of boiling water, simmer half an hour, strain and add the juice of a lemon. Sweeten to taste. A STRANGER.

Nothings.

1. PRESSED YEAL OR CHICKEN.—Have some veal bones or skin, obtained by cutting out bones, etc., before serving. Then the bones will not be cast away and the dinner will be as good. Save bones of steak and chop by cutting out before broiling. Chop your ends of bacon, pork, beef, etc., put all in stew kettle with one half cup salted water, or made gravy. Take cooked meat in square mould, pour thick liquor over and press until jellied.

For Chicken. To have enough chicken left for the above as well as for patties, cut the breast off and reserve the bones, and serve small pieces. Never keep any morsel from plates; after seeing mothers save a half eaten drum stick or breast—from a guest's plate—then the dinner is being cleared and put it by for Willie after school. I suggest it would have been better to have served less to guest at first and to serve twice if necessary.

2. CHICKEN PATTIES.—Take some chicken, a leg and any cold meats, mince and roll in squares of pie crust, pinch up in triangles, bake and serve with gravy.

3. MINCED MEAT.—Slices of liver, stale bread, water, mince cooked liver, and bits of bacon, etc., stew with some onion tops and dish on rounds of toast.

S. D.

Hours of Ease.

A Contrast.

Two men toiled side by side from sun to sun,
And both were poor;
Both sat with children when the day was done,
About their door.

One saw the beautiful in crimson cloud
And shining moon;
The other with his head in sadness bowed
Made night of noon.

One loved each tree and flower and singing bird
On mount and plain;
No music in the soul of one was stirred
By leaf or rain.

One saw the good in every fellow man,
And hoped the best;
The other marvelled at his Master's plan,
And doubt confessed.

One having heaven above and heaven below,
Was satisfied;
The other discontented lived in woe,
And, hopeless, died.

The Reign of the Candle.

Our grandmothers will tell us that in their young days the candle held undisputed sway. Every one recognized its power, and bowed allegiance to its sovereignty. Happy the housewife whose worldly conditions were so abundant as to count among her treasures a wax candle, and its holder of highly polished, heavy brass; or, what was yet more magnificent, could she but exhibit on her high mantel shelf, in as exact a position as would

so many sentinels, three girandoles, themselves ablaze with prismatic light. The largest one was placed in the center, and a smaller one just so many inches from either end. So dignified seemed their proprietorship; not alone of the mantel, but of the straight-back, hair-seat chairs and sofa, that even an individual entering a room where candle light was streaming from such a source, must, at least in a measure, be subject to its authority.

People of moderate means made their own candles, and would frequently have considerable amusement constructing their so-called "tallow dips." And amateurs who were successful candle makers, were justly proud in exhibiting their workmanship.

It was a saying in the generation of which I write, "We will meet at candle-light." For those who attended divine service, the clergyman would give as the hour for assembling, "Church will begin at candle-light." So, not so many years ago, the candle was a strength known and felt by all. And many were the hours of happiness and blessing directly received from its kindly influence.

And now the ultra-fashionable people go back to the old-time furnishings, and say candles are among the "must haves" to be introduced in the present households. For every thing, in these days, to be artistic and beautiful, and worthy of a place in my lady's drawing room, must bear the stamp of the olden time. The portraits of Marie Antoinette and the Princess de Lamballe, on old Sevres porcelain, the Gobelin tapestries belonging to the time of Louis XIV., and the candlesticks from as far away back as it is possible to resurrect them, are now the proper and correct mode.

And so, in obedience to the old-time furnishing, we once more have the reign of the candle, and while it holds a minor position, no longer having the undisputed power of illumination, it has its place, and a very important and pleasing one it is.

The designs in candlesticks may almost bear the cognomen of legion. A few cents will buy either a plain or decorated cheap china one, and there are also many inexpensive metals wrought into artistic candlesticks, both tall and short. The handsomer ones are made of polished brass, Worcester china, or Paris bique. There are also many varieties in Leed's pottery or wrought iron. For parlor ornaments or the dining table, candleabras of rich cut glass, sterling silver, or Vienna brass, are the proper thing. As for the candles, they come plain or twisted, or with patent ends, and in all colors—cream, violet, rose, orange or maroon. They can even be obtained in any variation of color you may desire. Shades for candles are made from muslin or paper in dainty designs. One favorite is wreathed with daisies, others represent flowers, such as roses, lilies or tulips.

Indeed, the candle has not outlived its usefulness, beauty and honor, for not alone does it adorn many departments of the home, but "it's a mighty convenient thing to have," as our cook said the other day, while with tin candlestick in which blazed a short sperm candle, she found her way for the first time, over what otherwise would have been a dark stairway, "besides, Miss," she adroitly added, "a bit of this candle rubbed on the bottoms of the irons will always keep them from sticking to the collars and other starched pieces."

"Yes," said her mistress, "and a small piece of the tallow candle melted and vigorously applied to the nose of infants and young children will always check, and frequently entirely cure, that disagreeable disease known as 'cold in the head.'"—*Selected.*

Hygiene.

Seasonable Remedies.

The following seasonable remedies are of great value in a family, and the ingredients ought to be kept in every house. Applied in time they will save large doctors' bills. They have been often tried and found reliable:

FOR CATARRH.—Equal parts of finely pulverized borax and white sugar, used as a snuff. Another for same complaint, snuffing up salt water, a tablespoonful of salt to a pint of water.

FOR CROUP.—Grate or shave into small particles a teaspoonful of alum, mix it with about twice its quantity of sugar to make palatable and give as quick as possible. It will give great relief.

FOR COLDS.—A quart of boiling water, over four tablespoonfuls of flaxseed. Steep, not boil, three hours; cover closely while steeping; strain, sweeten to taste; add juice of two lemons, excellent.

ANOTHER FOR COLDS.—One ounce each of licorice root, bone set, flaxseed and slippery elm bark made fine, and mixed together. Add to all one quart of water; steep slowly for ten hours; strain, and add to this one pound loaf sugar, one pint good molasses, then boil a few minutes and bottle. Tablespoonful four or five times daily, very effectual.

FOR SCARLET FEVER.—Warm lemonade with gum arabic dissolved in it. A cloth rung out in hot water and laid upon the stomach; remove as fast as it becomes cool.

ANOTHER.—Thoroughly anoint the patient with sulphur ointment twice a day; give five to ten grains sulphur in a little jam three times a day. Burn on hot shovel sufficient flour of sulphur to fill the room with fumes so that the patient may inhale.

YET ANOTHER.—Sulphate of zinc one grain; fox glove (*digitalis*) one grain; half teaspoonful of sugar, five ounces of water; mix well, take

teaspoonful of mixture every hour, a wonderful effect in a few hours.

FOR SEVERE BURNS.—Lime water and linseed oil made into a thick cream-like substance and spread over the parts. It excludes the air and allays inflammation.

FOR A SORE THROAT.—Cut fat slices of boneless bacon, pepper thickly with red pepper and tie round the throat with flannel cloth on going to bed. When a cold first appears do not forget keeping the feet entirely warm and especially at bed-time. The object is to draw the blood away from the parts congested. Keep bricks in the stove to be always ready to apply. Keep the above hints where you can refer to them quickly.

Our Boys and Girls.

Astronomy.

Boys and girls, here is a short lesson in astronomy, about one of the planets of our solar system; and if you take an interest in this kind of information, we will give other lessons from time to time. Astronomy is becoming very popular all over our country just now, and we think every body should learn something about the wonders of which it tells us.

The Morning Star.

Whoever is up about four o'clock in the morning will see a bright, flashing star rising in the eastern horizon not far from the place where the sun first appears. That star is the planet Venus, the brightest star ever seen in the heavens. Her place is now in that part of the Zodiac girdle known to astronomers as Sagittarius. But she will not tarry there long, for she moves entirely through the Zodiac in 225 days as she makes her yearly circuit about the Sun. Until the 3d of last December she was east of the Sun and set after him several hours as evening star. Now she is west of him and rises several hours before him and so is morning star, and will continue so until September 18th. In the morning until nearly sunrise, when all the fixed stars of the sky have faded away this fair Wanderer, the "Lucifer" and "Phosphor" of the ancients may still be seen.

On the 8th of the present month she was at her greatest brilliancy and was seen plainly by the naked eye through the day. Then she was in perihelion or at her nearest approach to the Sun; for like all the other planets of the solar system her path is an ellipsis and not a true circle.

Viewed through a telescope the flashing of Venus disappears and only a round disc remains, which at intervals shrinks to a half, a quarter, or a crescent; for she has phases or changes like our moon. She moves through space at the rate of 21 miles per second, and makes her annual circuit round the Sun as already stated in 225 days, at a distance from him of 67 millions of miles. She is nearly

as large as our earth, and has twice the heat and light.

Of all the planets she is nearest to us, and is the second from the Sun; our earth being the third.

Care in the House—Chap. VI.

When they could no longer stay in the house, the sister in the city took them in until Mr. Fair could get a position. They staid until he could find a situation; a place; work; a day's wages for labor. Then his sister brought up the Livingstone matter.

"You have subscribed to it; are a sort of share-holder; they will give you work at the mines. I may teach, and Mayzie can take boarders."

"What! a child of mine." "Mines for me?" "No, we will die first."

"Papa," said Mayzie, "I am dead; let us have a resurrection. I won't stay here; let's take that place Mr. Hunting came to tell you about; you to run the engine and that large house."

"Do you understand, my child, that running engines is not my work, a professional."

"Papa, I will go out to service," she cried. It was shocking of course, to have an only brother out in the country, running an engine for a lumber camp, but they could not stay on the city sister forever. She objected to both things, and it was all so uncomfortable that they mutually decided to make a trial of Flattown mills.

It was done in a day, in a week it was an old story, with something of the old-time tune of "Joyous Life." Mayzie was so fond of housekeeping, that to have ten rooms to arrange was a prospective pleasure. They were boarding the hands, at Flattown, the name of the settlement, consisting of the mill and boarding house. Mayzie had not yet been over the house. She helped the daughter of the former hostess do the cooking. This daughter was to leave, when the Fairs were initiated; then Mayzie was to take charge of the rooms that her aunt was trying to humanize.

"Matches scratched all over; spittoons carelessly used; dirt; dust. It's a big undertaking."

Notable Temperatures of Water.

Thirty-two degrees Fahrenheit, the freezing point; 39 degrees F., the point of maximum density; 62 degrees F., the British standard temperature; 212 degrees F., the boiling point.

The weight of a cubic foot of cold water is about 1,000 ounces, or 62.5 pounds.

The weight of a cylindrical foot of water at 62 degrees is about 49 pounds.

The weight of one gallon of water is ten pounds, and the correct volume is 277.123 cubic inches.

One cubic foot of water contains six and one-fourth gallons.

The capacity of one gallon is equal to one square foot, about two inches deep; or to one circular foot about two and one-half inches deep.

One ton of water contains 224 gallons; 100-weight of water a fraction over eleven gallons.

A pint of water weighs one and a quarter pounds.

Sunday Reading.

Golden Thoughts.

OUR yesterdays are harvested for good or evil in to-day; and whether we will or not we bear into to-morrow for weal or woe, the forgotten moments of to-day, garnered up in body, mind and character.

A DUTY shunn'd or a duty delayed is a duty still. There is no tarshih of business or pleasure or indolence where a man can hide himself from the infinite eye of Him whose word of command is the highest law of the soul.

THE law of duty is supreme. It claims authority over reason and conscience, over talents and possessions, over everything that is greatest and noblest in man.

To the eye of Christian faith the skies are always clear, the pathway of ascent from earth to heaven is always open, and angels of blessing are ever coming and going on errands of mercy. The great inheritance, the glorious home is not far away nor hidden in thick clouds. God's presence makes heaven, and He is with us everywhere; His banner over us is light and love; His angels are our guardians and companions. In every place where there is a human heart longing for divine consolation, there is God's house, there is heaven's gate, there are infinite sources of hope and peace.

GENTLENESS is a sort of mild atmosphere, and it enters into a child's soul like the sunbeam into the rosebud, slowly but surely expanding it into beauty and vigor.

Miscellaneous.

A Good Suggestion.

The Fallston Farmers' Club of Harford county, Md., proposes that the citizens of the county unite in establishing in Belair a permanent exposition or display of the county's productions and industrial resources, to make these advantages known, to advertise the county and to attract public attention to its special features. It is urged that such a course would encourage immigration and new enterprises be introduced, and the county made to assume that position of wealth and prosperity for which nature intended it.

The advantages and products of Harford are numerous and varied, and this seems a practical plan of making them known to the outside world.

The Harvester Trust Broken Up.

The great combine of the manufacturers of harvesting machinery has been dissolved, almost as soon as formed. It was soon brought face to face with grave legal obstacles to the consummation of the enterprise for which it was formed, of such a character that after careful consideration, the whole undertaking was abandoned.

A Boston despatch says: The collapse follows the withdrawal of Deering & Co., of Chicago, and is caused by disagreement as to the syndicate's policy between the two largest companies in the business, the Deerings and the McCormick company, also of Chicago.

The Tomato Pack of 1890.

The *American Grocer*, in its annual review of the canned goods industry for 1890, says the tomato pack in the country was 3,166,177 cases, against 2,976,765 cases in 1889 and 3,343,137 in 1888. The full crop in Maryland, New Jersey and Delaware alone prevented the pack from being the lightest since 1885. The pack in Maryland last year was 949,157 cases, against 671,333 cases in 1889. This State continues the largest source of supply. The stock of tomatoes cannot be beyond the requirements of the seven months which intervene before the appearance of 1891 goods, if it is ample for the needs of that period. So far as chances are concerned, they are decidedly in favor of holders.

A, B, C OF AGRICULTURE.—This is the title of a compact pamphlet recently published by Messrs. W. S. Powell & Co., of this city, which contains such useful and practical information on agriculture and agricultural chemistry, and as copies of it may be had free for the asking, it will probably have, as it deserves, a large circulation.

Brief News Summary.

FOREIGN.—Parnell conferred with the Irish leaders at Bologna, and reached an agreement. It is said, whereby he is to retire in favor of Dillon or O'Brien.—The weather in Europe has been intensely cold. People being found frozen to death in London streets. A great storm and blizzard prevailed throughout Europe, blocking the harbors and doing great damage.—A revolution is threatened in Chili.—Sixty persons were killed outright by the explosion in the coal pit in Polish Ostran.—The minister of justice of Russia has ordered that all Hebrew lawyers in that country be expelled, and that no more members of that race be allowed to practice law.—An enormous crowd of holiday-makers were on the ice-covered surface of the Danube river, between Buda and Pesth, Hungary, when the ice gave way. A number of persons were drowned.—The Italian government is well pleased with the McKinley tariff law, because 48 per cent. of Italian exports to the United States are admitted free, 36 per cent. at a reduced duty, 12 per cent. at the old duty, while the duty is increased on less than 4 per cent.—William Weld, a prominent agriculturist and proprietor of the *Farmer's Advocate*, fell into a water tank at his residence, in London, Ont., and was

drowned.—During a dense fog the oil-laden steamship *Caroline Robert de Massey* was sunk off the coast of Kent, England, by the steamship *Paethwait Hall*.

GENERAL.—The New Hampshire legislature met and elected H. H. Tuttle governor.—Gen. Schofield ordered an army officer on duty in charge of Pine Ridge agency.—Emma Abbot, the singer, died, she left a fortune of a million.—Ex-Archbishop General Devens died.—Secretary Tracy has severely rebuked Commander Reiter for his action which resulted in death of Barrundia.—Genl. F. E. Spinner, formerly Treasurer of the U. S., died. He was the first official to employ women in the Treas. departments, the female clerks of the Treasury will erect a monument to him.—Judge Brown, the new associate justice of the United States Supreme Court, took his seat upon the bench.—Secretary Blaine's recent correspondence with Lord Salisbury with regard to the Behring sea fisheries has been made public.—The International Monetary Conference met in Washington on Wednesday.—The British government began a suit involving the Behring sea question in United States supreme court.—General Miles telegraphs that nothing but a mistake or accident can prevent the pacification of the Indians.

MARYLAND.—Mr. Walter R. Abell, one of the proprietors of the *Baltimore Sun*, died suddenly of neuralgia of the heart, January 3d, in the forty-second year of his age. About the time of Mr. Abell's death his sister, Miss Mary L. Abell, took the white veil at the Convent of the Visitation, in Georgetown, D. C.—Rignal W. Baldwin, judge of the Board of Trade court of arbitration, died.—Col. James H. Steele died.—It is said H. Webster Crowl overdrew his account at the Franklin Bank to an amount approximating \$100,000.—A fire at Phoenix, Baltimore county, destroyed the store of the Phoenix Company and the houses of Messrs. Gosnell and Kite, causing a loss of about \$16,000.—The case of the State against the bondsmen of State Treasurer Archer was resumed at Towson. Archer was brought from the penitentiary to testify, but refused to do so, or to be sworn.—The residence of Stevenson White, in Howard co., was burned.—The store and dwelling of John C. Cryer, in St. Mary's Co., was burned, with \$600 in money. Insurance \$5,500.—Adjutant-General Howard reports the total militia force of Maryland as numbering 2,003.—Geo. W. Whitaker, of Cecil Co., largely engaged in the iron business, and Franklin Whitaker, a well-known citizen of Harford Co., died.

CONGRESSIONAL.—The Senate, by a vote of 34 to 29, laid aside the election bill and took up the bill to provide against contraction of the currency, eight republicans voting with the democrats to take up the bill.—The financial and shipping subsidy bills occupied the attention of the Senate and House respectively.—The Senate passed, instead of the pending financial bill, a bill for free coinage of silver, providing that the dollar be coined of 412½ grains of standard silver, by a vote of 39 to 27, and then by a majority of one, (the Vice President) determined to take up the election bill.

VIRGINIA.—Mr. John D. Kelley, father of Hon. Anthony M. Kelley, died in Norfolk.—Mayor Ellyson has approved an ordinance for converting the Jeff. Davis mansion, in Richmond, into a museum and receptacle for interesting relics of the late war.—Governor McKinney is in favor of a State oyster commission.—Col. John Schaleford Green died in Norfolk.—In a shooting affray in Boone Co., W. Va., George Jorrell was killed and his father, Peter Jorrell, was mortally wounded.—Judge Leake, of the Chancery Court of Richmond, has rendered a decision in favor of Bettie Thomas Lewis, colored, who claimed the estate of the late W. A. Thomas. The amount involved is over \$200,000.

Baltimore Markets—January 15.

BREADSTUFFS.

Flour.—Firm. Western extra selling at \$3.85, and do. Family at \$4.75; Howard street family at \$4.60@4.75.

Wheat.—Quiet, but firm. Southern spot Fultz sold at 93@103 cents and longberry do. at 100@103 cents. Western No. 2 red spot at 97½ cts., and May delivery 102 cents.

Corn.—Steady. Southern white sold at 60@61 cents, do. yellow at 61@62 cents. Western mixed spot at 59 cents, May at 58 cents.

Oats.—Steady. Ungraded Southern and Pennsylvania 48@53 cents; Western white 53@55 cents, do. mixed 50@51 cents, standard and inferior 48@49 cents, No. 2 white 52½@53 cents, and No. 3 mixed 50@51 cents per bushel.

Rye.—Steady. Choice \$1.82 cents; good to prime 70@80 cents, and common to fair 70@78 cents per bushel.

Cotton.—Local market firm, at 9½ cents per lb. for middling.

Hay.—Quiet. Choice Timothy \$11.50; good to prime \$10.50@11.00; fair to good mixed, \$9.00 @10.00; common and inferior \$8.50@8.50. Clover Hay \$9.00@10.00.

Straw.—Rye in carloads \$15.00@16.00 for large bales in sheaves, \$10.50@11.50 for blocks; wheat \$7.00@8.00; and oat \$9@10 per ton, in blocks. Short, chaffy stock \$1 per ton less.

At Scales.—Hay—Timothy \$7@11. Clover Hay \$7@10 per ton. Straw—Wheat \$8, Rye \$14@16, Oat \$9 per ton. Bar Corn, \$3.15@3.25 per bbl.

Mill Feed.—Firm. Western bran, light, 19@23 lbs., \$25.00; do. medium, 14@16 lbs., \$23.42; heavy, over 16 lbs., \$21.50@22.50, and middlings \$23, all on track. City Mills middlings \$24 per ton, sacked and delivered.

Meats.—Cloverseed 8@8½ cents per lb. for choice new Western, prime do. 7½@7¾ cents, No. 2 7@7¼ cents, and near-by 6½@7 cents per lb. Timothy seed \$1.45@1.55 for prime in carload lots of Western. Orchard grass \$1.30@1.40. Flaxseed \$1.35@1.45 per bushel.

Provisions.—Quiet. Sugar-pickled Shoulders 8 cents; smoked sugar-cured Shoulders 7 cts.; sugar-cured Breasts 7½ cents. Canned and uncanned Hams, small averages, 10½ cts.; large averages 10½ cts. per lb. Mess Pork, old, \$11.50, and do. new \$12 per bbl. Lard, best refined, pure, 7½ cts. per lb.

Dressed Hogs.—Demand moderate. We quote small and smooth at 4½@4¾ cents, rough and heavy about 4@4¼ cents, and medium size 4½ @ 4¾ cents per lb.

Butter.—Quiet. We quote: Fancy creamery jobbing at 25 cents; good to choice creamery 25@26 cents per lb. Imitation creamery 24@25 cents per lb. Roll butter, fine 17@18 cents, choice 14@15 cents per lb. Creamery prints 20@30 cents per lb.

Eggs.—Firm. Choice fresh, 30@37 cents, held 16@24 cents, lined 18@22 cents per dozen.

Dressed Fowls.—Strong. Ducks 11@13 cts. Geese 9@11 cents per lb. Extra to fancy small Turkeys 14@15 cents, and good to choice do. 13½@13¾ cents; small Chickens 11@12 cents, large to medium 10@11 cents per lb. for undrawn stock. Capons, choice large 20 cents, and do. small 16@18 cents per lb.

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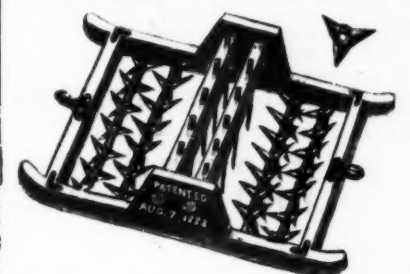
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